

PO Job Risk Assessment

Name(s) of Risk Team Members: Ed Baker, Karl Kusche, Al Langhorn, Kim Mohanty, Mike Zarcone (facilitator)	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Compressed gas work Job Number or Job Identifier: PO-JRA-012	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Description: Physics work with compressed gas cylinders and systems, including flammable gases, and fuel-gas soldering and welding systems.	Severity (C)	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
	Likelihood (D)	Extremely Unlikely	Unlikely	Possible	Probable	Multiple
Training and Procedure List (Optional): Compressed Gas Cylinder Training						
Rev. #: 0 Date: March 10, 2005						
Stressors (if applicable, please list all): Weather conditions, storage facility conditions, pressure to get job done		Reason for Revision (if applicable):			Comments:	

				Before Additional Controls							After Additional Controls					
Job Step / Task	Hazard	Control(s)	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction
Storage of gas cylinders	Being struck by object due to pressure release	Cylinder certification, equipment inspection, storage area conditions, OSHA regulations, cylinders capped and secured	Y	1	5	5	1	25								

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Storage of gas cylinders (cont'd)	Explosion or fire due to ignition of gas	Storage area conditions, cylinder certification, equipment inspection, separation of fuel and oxidizer cylinders, OSHA regulations, cylinders capped and secured	Y	1	5	5	1	25								
Transporting cylinders from storage to use area	Overexertion injuries caused by excessive lifting, pushing, pulling, holding, carrying or throwing of an object	Wheeled gas carts, training, safety shoes, cylinders secured	Y	1	3	3	3	27								
	Being struck by object due to pressure release	Cylinder design/certification, equipment inspection, training, cylinders capped and secured	Y	1	3	5	1	15								
Attaching regulator to cylinder	Being struck by object due to pressure release	Regulator design/certification, equipment inspection, safety glasses, training, cylinders secured	Y	1	3	5	1	15								
Connecting regulated cylinder to system	Being struck by object due to pressure release	Cylinder/regulator design/certification, equipment inspection, training, system design/review, isolation valves, OSHA regulations, cylinders secured, safety glasses	Y	1	3	4	2	24								

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Connecting regulated cylinder to system (cont'd)	Explosion due to improper mixture of incompatible gases	Engineering and Administrative controls, training	Y	1	3	5	3	45								
	Explosion due to improper regulator (e.g., oiled regulator on oxygen cylinder)	Use of properly rated regulator, no use of adapters, training, Tier 1	Y	1	1	4	1	4								
Use of non-flammable gas	Being struck by object due to pressure release	Equipment inspection, training, system design/review, safety glasses, OSHA regulations, cylinders secured	Y	1	5	4	1	20								
	Oxygen deficiency	System design/review, ventilation, ODH review, Tier 1	Y	1	5	5	1	25								
	Poisoning or lung damage due to inhalation of toxic gas	System design/review, MSDS, ventilation, Tier 1	Y	1	5	5	1	25								
Use of flammable or oxidizing gas (in addition to above hazards)	Explosion or fire due to ignition of gas	System design/review, MSDS, ventilation, Tier 1, OSHA regulations, cylinders secured, removal of heat or spark sources, fire retardant clothing	Y	1	5	5	1	25								
	Explosion or fire due to reaction of gas with surroundings	System design/review, MSDS, ventilation, Tier 1, OSHA regulations, segregation of materials	Y	1	5	5	1	25								

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Use of fuel-gas system for soldering, welding or other operation	Explosion due to improper gas mixture	Training, burning permits, OSHA regulations, MSDS, proper nozzles and ignition devices, ventilation	Y	1	5	5	1	25								
	Explosion or fire due to leaking hoses, nozzles or valves	Equipment inspections, Tier 1, training, OSHA regulations	Y	1	5	5	1	25								
	Fire due to ignition of surrounding materials or clothing	Area inspections and preparation, Tier 1, training, fire retardant clothing, fire watch	Y	1	5	5	1	25								
	Contact with heated objects resulting in burns	Work area conditions, Tier 1, burning permits, training, gloves, proper tools or tongs	Y	1	5	2	3	30								
	Eye injury from welding	Welding helmet or other eye protection, training, OSHA regulations, burning permits	Y	1	3	3	3	27								
Disconnecting gas supply from system	Being struck by object due to pressure release	Cylinder/regulator design/certification, equipment inspection, training, system design/review, isolation valves, safety glasses, OSHA regulations, cylinders secured	Y	1	5	2	2	20								

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Removing regulator from cylinder	Being struck by object due to pressure release	Cylinder/regulator design/certification, equipment inspection, training, system design/review, safety glasses, OSHA regulations, cylinders secured	Y	1	5	5	1	25								
Transporting spent cylinder to storage area	Overexertion injuries caused by excessive lifting, pushing, pulling, holding, carrying or throwing of an object	Wheeled gas carts, training, safety shoes, cylinders capped and secured	Y	1	3	3	3	27								
Further Description of Controls Added to Reduce Risk: - Need to review all gas cylinder carts as part of Tier I inspection. - There was a suggestion for a compressed cylinder refresher course.																
*Risk:	0 to 20 Negligible	21 to 40 Acceptable	41 to 60 Moderate			61 to 80 Substantial			81 or greater Intolerable							